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L6: Entry 4 of 5 File: USPT Apr 2, 1991

US-PAT-NO: 5004737
DOCUMENT-IDENTIFIER: US 5004737 A

TITLE: Quaternary ammonium-substituted sterol derivatives

DATE-ISSUED: April 2, 1991

INVENTOR-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY |
|---|---|---|---|---|
| Kim; Young D. | Seoul | | | KR |
| Ha; Byung J. | Seoul | | | KR |

ASSIGNEE-INFORMATION:

| NAME | CITY | STATE | ZIP CODE | COUNTRY | TYPE CODE |
|---|---|---|---|---|---|
| Pacific Chemical Co., Ltd. | Seoul | | | KR | 03 |

APPL-NO: 07/ 411411 [PALM]
DATE FILED: September 22, 1989

INT-CL: [05] A61K 31/575, C07J 41/00

US-CL-ISSUED: 514/182; 552/544, 552/546
US-CL-CURRENT: 514/182; 552/544, 552/546

FIELD-OF-SEARCH: 552/544, 552/546, 514/182

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected Search ALL Clear

| | PAT-NO | ISSUE-DATE | PATENTEE-NAME | US-CL |
|---|---|---|---|---|
| ☐ | 2889318 | June 1959 | Bergstrom | 552/544 |
| ☐ | 3013009 | December 1961 | Marshall | 552/544 |

FOREIGN PATENT DOCUMENTS

| FOREIGN-PAT-NO | PUBN-DATE | COUNTRY | US-CL |
|---|---|---|---|
| 4640510 | November 1971 | JP | |

OTHER PUBLICATIONS

h e b b g e e e f c e b e ge

Morrison and Boyd "Organic Chemistry", 3rd Ed., pp. 563-566, (1978).
Noguchi et al., CA:09950V (1972). (abstract for JP-46-40510).

ART-UNIT: 123

PRIMARY-EXAMINER: Waddell; Frederick E.

ASSISTANT-EXAMINER: Chang; Celia

ATTY-AGENT-FIRM: Millen, White & Zelano

ABSTRACT:

The present invention relates to a novel quaternary ammonium-substituted sterol derivative of the following formula: ##STR1## wherein Q represents an anion of a strong inorganic acid, A represents an oxygen, R.sub.1, R.sub.2, R.sub.3, t, n, and the sterol Rst are defined as herein. The compounds of the present invention as a result of introducing a cationic group into hydroxy group of sterols of ethoxylated compounds thereof which are non-ionic, shows the enhanced substantivity against substrate having, on its surface, an anionic characters under normal conditions such as skin and hair of human being. The compound of the present invention can be used in the field of cosmetics.

6 Claims, 0 Drawing figures

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L7: Entry 42 of 48 File: USPT Jun 23, 1998

DOCUMENT-IDENTIFIER: US 5770559 A
TITLE: Solubilization of pharmaceutical substances in an organic solvent and preparation of pharmaceutical powders using the same

Detailed Description Text (9):
Examples of anionic amphiphilic materials include sulfates, sulfonates, phosphates (including phospholipids), carboxylates, and sulfosuccinates. Some specific anionic amphiphilic materials useful with the present invention include: sodium dodecyl sulfate (SDS), bis-(2-ethylhexyl) sodium sulfosuccinate (AOT), cholesterol sulfate and sodium laurate. Examples of cationic amphiphilic materials include those having an ammonium group or a guadinium group, including substituted variations of those groups. Specific cationic amphiphilic materials include cetyltrimethylammonium bromide and cetyltrimethylammonium chloride. Preferred amphiphilic materials are those posing little or substantially no toxicological problem for the human or animal host. Particularly preferred anionic amphiphilic materials are SDS and AOT.

Detailed Description Text (26):
An additional embodiment of this invention is a method of incorporating proteins into lipid vesicles, liposomes, or detergent micelles. Shaking of an oil-water mixture with an HIP complex of a protein leads to emulsification, indicating that a HIP complex can more easily be introduced into emulsion delivery systems than the protein alone. Systems for such use can be designed using either the insoluble material in suspension formulations or in oil formulation, such as oil in water emulsions, other examples include nasal and pulmonary aerosols, ophthalmic suspensions, transdermal patches, lozenges, chewing gum, buccal and sublingual systems, and suppositories.

Detailed Description Text (29):
As used in the present invention, the term "anionic detergents" encompasses any hydrophobic material that is a salt of an acid which can be employed to modify solubility properties in the described way, including sulfates, sulfonates, phosphates, and carboxylates. Sulfates are the salts of the stronger acids in this series and, therefore, the most efficient at forming ion pairs. Provided that the alkyl chains or aryl rings are of 8-18 carbons in length, they are potential candidates for HIP methodology. Presumably cationic detergents, such as dodecylamine hydrochloride or cetyltrimethylammonium bromide (CTAB), may also work for negatively charged polypeptides.

Detailed Description Text (47):
Any biodegradable polymer may be used which may be co-dissolved into the organic solvent along with the pharmaceutical substance and the amphiphilic material. Examples of such biodegradable polymers include those having at least some repeating units representative of polymerizing at least one of the following: an alpha-hydroxycarboxylic acid, a cyclic diester of an alpha-hydroxycarboxylic acid, a dioxanone, a lactone, a cyclic carbonate, a cyclic oxalate, an epoxide, a glycol, and anhydrides. Preferred is a biodegradable polymer comprising at least some repeating units representative of polymerizing at least one of lactic acid, glycolic acid, lactide, glycolide, ethylene oxide and ethylene glycol. The biodegradable polymers may be a homopolymer or a copolymer of two or more different monomers. Preferred homopolymers include poly(lactic acid), polylactide, poly(glycolic acid), polyglycolide and poly(ethylene glycol).

CLAIMS:

16. The method of claim 15, wherein

said biodegradable polymer comprises at least some repeating units representative of polymerizing at least one of the following: an alpha-hydroxycarboxylic acid, a cyclic diester of an alpha-hydroxycarboxylic acid, dioxanone, a lactone, a cyclic carbonate, a cyclic oxalate, an epoxide, a glycol and an anhydride.

=> d l8 1-4 ibib abs kwic

L8 ANSWER 1 OF 4 USPATFULL
ACCESSION NUMBER: 97:49352 USPATFULL
TITLE: Grooming composition
INVENTOR(S): Holloway, Trudy L., 823 Fairdale Dr., Lexington, KY, United States 40503

| | NUMBER | KIND | DATE |
|---|---|---|---|
| PATENT INFORMATION: | US 5637294 | | 19970610 |
| APPLICATION INFO.: | US 1994-297490 | | 19940829 (8) |

RELATED APPLN. INFO.: Continuation of Ser. No. US 1992-911124, filed on 9 Jul 1992, now patented, Pat. No. US 5372806 which is a continuation-in-part of Ser. No. US 1992-816239, filed on 3 Jan 1992, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Levy, Neil S.
LEGAL REPRESENTATIVE: Wood, Herron & Evans, L.L.P.
NUMBER OF CLAIMS: 4
EXEMPLARY CLAIM: 1
LINE COUNT: 254
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A grooming composition includes by volume: 79.0%-91.0% water, 5.0-12.0% degreasifying agent (preferably, isoparaffinic hydrocarbon solvent), 0.5-3.5% conditioning and detangling agent (preferably, a silicone aqueous emulsion), 0.0-0.6% liquid vitamin E and 0.0-5.0% fragrance (preferably, vanilla flavoring).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
SUMM . . . and 8 carbon atoms. Such a solvent is available from Chemcentral, Inc. of Hamilton, Ohio, and sold under the trademark ISOPAR C. Advantageously, the isoparaffinic hydrocarbon solvent ensures that the grooming composition leaves no slick, greasy residue after use. Further, the solvent prevents undue buildup of the grooming composition in the hair coat that could otherwise eventually have a degrading effect on the shine and healthy appearance of the coat.

L8 ANSWER 2 OF 4 CA COPYRIGHT 2001 ACS DUPLICATE 1
ACCESSION NUMBER: 125:150747 CA
TITLE: Hair preparations containing organosilicon resins
INVENTOR(S): Yoshida, Masashi; Uehara, Keiichi; Nanba, Tomyuki
PATENT ASSIGNEE(S): Shiseido Co Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| JP 08143429 | A2 | 19960604 | JP 1994-282138 | 19941116 |

AB Hair prepns. with excellent hair stetting ability and having lustrous shine contain 0.1-50 wt.% organosilicon resins having R3SiO1/2 (M), R2SiO (D) and SiO2 (Q) units [R = C1-6 hydrocarbon or phenyl; mol. wt. of MDQ unit-contg. organosilicon resin = 10,000 - 30,000] and 0.1-99 wt.% volatile silicone oil or hydrocarbon oil. A hair spray contained Isopar C 65.5, Isopar H 15.0, organosilicon resins [R = Me; mol. wt. of MDQ = 15,000 18.0, methylpheylpolysiloxane 1.0 wt.%, POE stearyl ether 0.5], and perfumes q.s.

AB Hair prepns. with excellent hair stetting ability and having lustrous shine contain 0.1-50 wt.% organosilicon resins having R3SiO1/2 (M), R2SiO (D) and SiO2 (Q) units [R = C1-6 hydrocarbon or phenyl; mol. wt. of MDQ unit-contg. organosilicon resin = 10,000 - 30,000] and 0.1-99 wt.% volatile silicone oil or hydrocarbon oil. A hair spray contained Isopar C 65.5, Isopar H 15.0, organosilicon resins [R = Me; mol. wt. of MDQ = 15,000 18.0, methylpheylpolysiloxane 1.0 wt.%, POE stearyl ether 0.5], and perfumes q.s.

L8 ANSWER 3 OF 4 USPATFULL

ACCESSION NUMBER: 94:108730 USPATFULL
TITLE: Grooming composition
INVENTOR(S): Holloway, Trudy L., Lexington, KY, United States
PATENT ASSIGNEE(S): Soft and Shine, Lexington, KY, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|---|---|---|---|
| PATENT INFORMATION: | US 5372806 | | 19941213 |
| APPLICATION INFO.: | US 1992-911124 | | 19920709 (7) |

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1992-816239, filed on 3 Jan 1992, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Page, Thurman K.
ASSISTANT EXAMINER: Levy, Neil
NUMBER OF CLAIMS: 3
EXEMPLARY CLAIM: 1
LINE COUNT: 261
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A grooming composition includes by volume: 79.0%-91.0% water, 5.0-12.0% degreasifying agent (preferably, isoparaffinic hydrocarbon solvent), 0.5-3.5% conditioning and detangling agent (preferably, a silicone aqueous emulsion), 0.0-0.6% liquid vitamin E and 0.0-5.0% fragrance (preferably, vanilla flavoring).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM . . . and 8 carbon atoms. Such a solvent is available from Chemcentral, Inc. of Hamilton, Ohio, and sold under the trademark ISOPAR C. Advantageously, the isoparaffinic hydrocarbon solvent ensures that the grooming composition leaves no

slick, greasy residue after use. Further, the solvent prevents undue buildup of the grooming composition in the hair coat that could otherwise eventually have a degrading effect on the shine and healthy appearance of the coat.

L8 ANSWER 4 OF 4 CA COPYRIGHT 2001 ACS DUPLICATE 2

ACCESSION NUMBER: 105:213934 CA
TITLE: Hair preparations containing silicones and hydrocarbon oils
INVENTOR(S): Yasuhara, Hiroaki; Okunuki, Yutaka; Nanba, Tomiyuki
PATENT ASSIGNEE(S): Shiseido Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 61158914 | A2 | 19860718 | JP 1984-279162 | 19841229 |
| JP 03007641 | B4 | 19910204 | | |

AB Hair prepns. comprise an org. silicone RnSiO2-n/2 (R = C1-6 hydrocarbyl, Ph; n = 1.0-1.8) 0.1-50 and a volatile hydrocarbon oil b. 60-260.degree. 0.1-99% by wt. The compns. give luster to hair and lasting wave-setting. Thus, a hair spray contained Isopar C (b.p 98/103.degree.) 65.5, Isopar H (b.p. 171-193.degree.) 15.0, silicones with mol. wt. .apprx.8000 and av unit formula Me0.30 Ph0.85 SiO1.43 18.0, Me Ph polysiloxane 1.0, polyoxyethylene stearyl ether 0.5, a perfume q.s., and a propellant q.s.
AB Hair prepns. comprise an org. silicone RnSiO2-n/2 (R = C1-6 hydrocarbyl, Ph; n = 1.0-1.8) 0.1-50 and a volatile hydrocarbon oil b. 60-260.degree. 0.1-99% by wt. The compns. give luster to hair and lasting wave-setting. Thus, a hair spray contained Isopar C (b.p 98/103.degree.) 65.5, Isopar H (b.p. 171-193.degree.) 15.0, silicones with mol. wt. .apprx.8000 and av unit formula Me0.30 Ph0.85 SiO1.43 18.0, Me Ph polysiloxane 1.0, polyoxyethylene stearyl ether 0.5, a perfume q.s., and a propellant q.s.